

ABSTRACT OF THE INVENTION

An apparatus and methods are provided for the separation of a subset from a complex mixture of particles, *e.g.* cells, virus, organelles, *etc.*, wherein the particles
5 have a binding moiety present on an accessible, usually external, surface. The apparatus comprises a capillary tube or array of capillary tubes having bound to the luminal surface a capture system comprising a cleavable linkage and a selective ligand. The capture system provides selectivity both in binding particles, through the ligand, and in the release of particles, through the cleavable linker. Each capillary
10 may be divided linearly into zones, where in each zone the composition of the capture system varies, particularly in the ligand specificity. In one embodiment of the invention, each zone comprises a ligand specific for a different positive or negative selection marker on the desired particles.